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ДИСЦИПЛИНА: «Распределенные системы»

Отчет по практической работе №6 Тема: «Наdoop»

Выполнил: Лыгин М. В.

группа: ТП-191

Администрирование системы

```
                                                  lemp@u20-07: ~
                                                                                                     lemp@u20-07:~$ sudo apt-get update
[sudo] password for lemp:
Hit:1 http://ru.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://ru.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://ru.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Hit:4 http://deb.anydesk.com all InRelease
Hit:5 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:6 http://ppa.launchpad.net/serge-rider/dbeaver-ce/ubuntu focal InRelease
Hit:7 https://download.docker.com/linux/ubuntu focal InRelease
Get:8 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:9 http://ru.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [277 kB]
Get:10 http://ru.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [406 kB]
Get:11 http://ru.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:12 http://ru.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [7 992 B]
Get:13 http://ru.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11 Metadata [30,5 kB]
Get:14 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [40,7 kB]
Get:15 http://security.ubuntu.com/ubuntu focal-security/universe amd64 DEP-11 Metadata [92,7 kB]
Get:16 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 DEP-11 Metadata [2 464 B]
Fetched 1 195 kB in 1s (841 kB/s)
Reading package lists... Done
lemp@u20-07:~$ sudo apt install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
chromium-codecs-ffmpeg-extra gstreamer1.0-vaapi libfwupdplugin1 libgstreamer-plugins-bad1.0-0 libva-wayland2
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
 ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java libatk-wrapper-java-jni libice-dev
  libpthread-stubso-dev libsm-dev libx11-dev libxau-dev libxcb1-dev libxdmcp-dev libxt-dev openjdk-8-jdk-headless
 openjdk-8-jre openjdk-8-jre-headless x11proto-core-dev x11proto-dev xorg-sgml-doctools xtrans-dev
Suggested packages:
 default-jre libice-doc libsm-doc libx11-doc libxcb-doc libxt-doc openjdk-8-demo openjdk-8-source visualvm
  fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei fonts-wqy-zenhei
The following NEW packages will be installed:
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/appletviewer to provide /
er) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jconsole to provide /usr/
Processing triggers for fontconfig (2.13.1-2ubuntu3) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for mime-support (3.64ubuntul) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-lubuntul) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for ca-certificates (20211016~20.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
Processing triggers for sgml-base (1.29.1) ...
Setting up x11proto-dev (2019.2-1ubuntu1) ...
Setting up libxau-dev:amd64 (1:1.0.9-0ubuntu1) ...
Setting up libice-dev:amd64 (2:1.0.10-0ubuntu1) ...
Setting up libsm-dev:amd64 (2:1.2.3-1) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntu1) ...
Setting up xllproto-core-dev (2019.2-lubuntul) ...
Setting up libxcb1-dev:amd64 (1.14-2) ...
Setting up libx11-dev:amd64 (2:1.6.9-2ubuntu1.2) ...
Setting up libxt-dev:amd64 (1:1.1.5-1) ...
lemp@u20-07:~$
 Secreting up trove deviation (firefree f) iii
lemp@u20-07:~$ java -version
openjdk version "1.8.0 342"
OpenJDK Runtime Environment (build 1.8.0 342-8u342-b07-0ubuntu1~20.04-b07)
OpenJDK 64-Bit Server VM (build 25.342-b07, mixed mode)
lemp@u20-07:~$
```

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                                                         lemp@u20-07: ~
lemp@u20-07:~$ java -version
openjdk version "1.8.0 342"
OpenJDK Runtime Environment (build 1.8.0 342-8u342-b07-0ubuntu1~20.04-b07)
OpenJDK 64-Bit Server VM (build 25.342-b07, mixed mode)
lemp@u20-07:~$ sudo nano /etc/environment
[sudo] password for lemp:
lemp@u20-07:~$
lemp@u20-07:~$ sudo adduser hadoop
Adding user `hadoop' ...
Adding new group `hadoop' (1001) ...
Adding new user `hadoop' (1001) with group `hadoop' .
Creating home directory `/home/hadoop' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for hadoop
Enter the new value, or press ENTER for the default
         Full Name []:
         Room Number []:
         Work Phone []:
         Home Phone []:
         Other []:
Is the information correct? [Y/n] y
lemp@u20-07:~$
lemp@u20-07:~$ sudo su hadoop
hadoop@u20-07:/home/lemp$ exit
lemp@u20-07:~$
Creating config file /etc/ssh/sshd_config with new version
Creating SSH2 RSA key; this may take some time ...
3072 SHA256:y+ncqDZBAL9tuhD6msxI12N3TgPgsMtQW3rsQF/9uX4 root@u20-07 (RSA)
Creating SSH2 ECDSA key; this may take some time ...
256 SHA256:iQMuEEMtd1QPHrteWBlb8Bo3oASO6MB5BzxXGW5v+Yg root@u20-07 (ECDSA)
Creating SSH2 ED25519 key; this may take some time ...
256 SHA256:I/BvPzAcYrTiUVvd5hTFmPa2fp5lw2Q13kR4sjPwbaE root@u20-07 (ED25519)
Created symlink /etc/systemd/system/sshd.service → /lib/systemd/system/ssh.service.
Created symlink /etc/systemd/system/multi-user.target.wants/ssh.service → /lib/systemd/sys
rescue-ssh.target is a disabled or a static unit, not starting it.
Setting up ssh-import-id (5.10-0ubuntu1) ..
Attempting to convert /etc/ssh/ssh_import_id
Setting up genders (1.22-1build2) ...
Setting up ncurses-term (6.2-0ubuntu2) ...
Setting up ssh (1:8.2p1-4ubuntu0.5) ...
Setting up pdsh (2.31-3build2) ..
Processing triggers for systemd (245.4-4ubuntu3.17) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
Processing triggers for ufw (0.36-6ubuntul) ...
lemp@u20-07:~$
```

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nauoop@uzo-o/:/nome/temp$ cu
hadoop@u20-07:~$ ssh-keygen -t rsa -N "" -f /home/hadoop/.ssh/id rsa
Generating public/private rsa key pair.
Created directory '/home/hadoop/.ssh'.
Your identification has been saved in /home/hadoop/.ssh/id rsa
Your public key has been saved in /home/hadoop/.ssh/id rsa.pub
The key fingerprint is:
SHA256:mzJs6hkSr0XEZ4AyVgXqHdYn3V6GhrNLKsE8mpM8xdY hadoop@u20-07
The key's randomart image is:
+---[RSA 3072]----+
     00.
  .0 . . 0 .
|+0.00 = +0
|++*.0 0 = 0
 .*XoE oS.
|.=*+0.0 .0
|.Bo...=.o
   0..= 0
      . +
+----[SHA256]----+
hadoop@u20-07:~$
nadoop@u20-07:~$ cat /home/hadoop/.ssh/id rsa.pub >> /home/hadoop/.ssh/authorized keys
nadoop@u20-07:~$ chmod 0600 /home/hadoop/.ssh/authorized_keys
hadoop@u20-07:~$ ssh localhost
The authenticity of host 'localhost (127.0.0.1)' can't be established.
ECDSA key fingerprint is SHA256:iQMuEEMtd1QPHrteWBlb8Bo3oAS06MB5BzxXGW5v+Yg.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'localhost' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.15.0-46-generic x86 64)
 * Documentation: https://help.ubuntu.com
                      https://landscape.canonical.com
 * Management:
 * Support:
                      https://ubuntu.com/advantage
52 updates can be applied immediately.
2 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
Your Hardware Enablement Stack (HWE) is supported until April 2025.
*** System restart required ***
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
hadoop@u20-07:~$ wget https://archive.apache.org/dist/hadoop/common/hadoop-3.1.2/hadoop-3.1.2.tar.gz
-2022-10-25 10:40:51-- https://archive.apache.org/dist/hadoop/common/hadoop-3.1.2/hadoop-3.1.2.tar.gz
-2022-10-25 10:40:51-- https://archive.apache.org/dist/hadoop/common/hadoop-3.1.2/hadoop-3.1.2.tar.gz
Resolving archive.apache.org (archive.apache.org)... 138.201.131.134, 2a01:4f8:172:2ec5::2

Connecting to archive.apache.org (archive.apache.org)|138.201.131.134|:443... connected.

HTTP request sent, awaiting response... 200 OK

Length: 332433589 (317M) [application/x-gzip]
Saving to: 'hadoop-3.1.2.tar.gz'
                           4%[=>
                                                                         1 13.85M 756KB/s
                                                                                             eta 6m 53s
hadoop-3.1.2.tar.gz
```

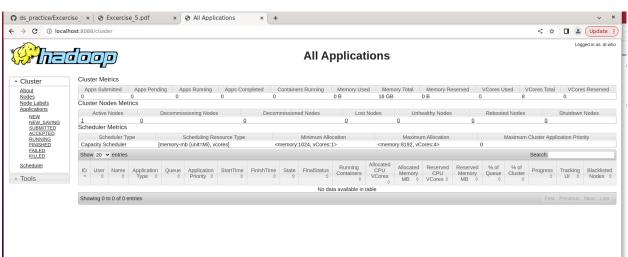
```
hadoop-3.1.2/share/doc/hadoop/images/icon_success_sml.gif
hadoop-3.1.2/share/doc/hadoop/images/icon_info_sml.gif
hadoop-3.1.2/share/doc/hadoop/images/breadcrumbs.jpg
hadoop-3.1.2/share/doc/hadoop/images/expanded.gif
hadoop-3.1.2/share/doc/hadoop/images/apache-maven-project-2.png
hadoop-3.1.2/share/doc/hadoop/images/icon error sml.gif
hadoop-3.1.2/share/doc/hadoop/images/logo_apache.jpg
hadoop-3.1.2/share/doc/hadoop/images/icon warning sml.gif
hadoop-3.1.2/share/doc/hadoop/images/newwindow.png
hadoop-3.1.2/share/doc/hadoop/images/maven-logo-2.gif
hadoop-3.1.2/share/doc/hadoop/images/banner.jpg
hadoop-3.1.2/share/doc/hadoop/images/logo maven.jpg
hadoop-3.1.2/share/doc/hadoop/images/collapsed.gif
hadoop-3.1.2/share/doc/hadoop/images/external.png
hadoop-3.1.2/share/doc/hadoop/images/h5.jpg
hadoop-3.1.2/share/doc/hadoop/images/logos/
hadoop-3.1.2/share/doc/hadoop/images/logos/build-by-maven-white.png
hadoop-3.1.2/share/doc/hadoop/images/logos/build-by-maven-black.png
hadoop-3.1.2/share/doc/hadoop/images/logos/maven-feather.png
hadoop-3.1.2/share/doc/hadoop/index.html
hadoop-3.1.2/share/doc/hadoop/project-reports.html
hadoop-3.1.2/include/
hadoop-3.1.2/include/hdfs.h
hadoop-3.1.2/include/Pipes.hh
hadoop-3.1.2/include/SerialUtils.hh
hadoop-3.1.2/include/StringUtils.hh
hadoop-3.1.2/include/TemplateFactory.hh
hadoop@u20-07:~$
lemp@u20-07:~$ nano .bashrc
lemp@u20-07:~$ source .bashrc
lemp@u20-07:~$
hadoop@u20-07:~$ ssh localhost
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.15.0-46-generic x86 64)
 * Documentation: https://help.ubuntu.com
 * Management:
                    https://landscape.canonical.com
 * Support:
                    https://ubuntu.com/advantage
52 updates can be applied immediately.
2 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
Your Hardware Enablement Stack (HWE) is supported until April 2025.
*** System restart required ***
Last login: Tue Oct 25 10:37:56 2022 from 127.0.0.1
hadoop@u20-07:~$ exit
logout
Connection to localhost closed.
hadoop@u20-07:~$ nano .bashrc
hadoop@u20-07:~$ source .bashrc
hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/hadoop-env.sh
hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/core-site.xml
hadoon@u20-07.-¢
```

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hadoop@u20-07:~$ source .bashrc
 hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/hadoop-env.sh
 hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/core-site.xml
 hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/hdfs-site.xml
 hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/mapred-site.xml
 hadoop@u20-07:~$ nano /home/hadoop/hadoop/etc/hadoop/yarn-site.xml
 hadoop@u20-07:~$ hdfs namenode -format
 WARNING: /home/hadoop/hadoop/logs does not exist. Creating.
 2022-10-25 11:17:05,277 INFO namenode.NameNode: STARTUP MSG:
 STARTUP MSG: Starting NameNode
STARTUP_MSG: host = u20-07/172.26.35.127
STARTUP_MSG: args = [-format]
STARTUP MSG: version = 3.1.2
STARTUP_MSG: classpath = /home/hadoop/hadoop/etc/hadoop:/home/hadoop/share/hadoop/common/lib/jetty-
 4.v20180605.jar:/home/hadoop/hadoop/share/hadoop/common/lib/jsr311-api-1.1.1.jar:/home/hadoop/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/ha
 ib/gson-2.2.4.jar:/home/hadoop/hadoop/share/hadoop/common/lib/curator-framework-2.13.0.jar:/home/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/hadoop/had
 p/common/lib/kerby-config-1.0.1.jar:/home/hadoop/hadoop/share/hadoop/common/lib/htrace-core4-4.1.0-incubating
 doop/hadoop/share/hadoop/common/lib/accessors-smart-1.2.jar:/home/hadoop/share/hadoop/common/lib/jett
 20180605.jar:/home/hadoop/hadoop/share/hadoop/common/lib/jcip-annotations-1.0-1.jar:/home/hadoop/hadoop/share
n/lib/commons-collections-3.2.2.jar:/home/hadoop/share/hadoop/common/lib/commons-lang3-3.4.jar:/home/l
 share/hadoop/common/lib/jackson-jaxrs-1.9.13.jar:/home/hadoop/share/hadoop/common/lib/jersey-server-1
hadoop/hadoop/share/hadoop/common/lib/httpclient-4.5.2.jar:/home/hadoop/hadoop/share/hadoop/common/lib/curate
 3.0.jar:/home/hadoop/hadoop/share/hadoop/common/lib/jackson-mapper-asl-1.9.13.jar:/home/hadoop/hadoop/share/l
 lib/jackson-core-2.7.8.jar:/home/hadoop/hadoop/share/hadoop/common/lib/kerby-xdr-1.0.1.jar:/home/hadoop/hado
 p/common/lib/jsch-0.1.54.jar:/home/hadoop/share/hadoop/common/lib/jackson-xc-1.9.13.jar:/home/hadoop/
 adoop/common/lib/slf4j-api-1.7.25.jar:/home/hadoop/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/common/lib/kerb-server-1.0.1.jar:/home/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/hadoop/share/
 p/share/hadoop/common/lib/metrics-core-3.2.4.jar:/home/hadoop/hadoop/share/hadoop/common/lib/jersey-core-1.1
 doop/hadoop/share/hadoop/common/lib/jul-to-slf4j-1.7.25.jar:/home/hadoop/share/hadoop/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/common/lib/co
 r:/home/hadoop/hadoop/share/hadoop/common/lib/log4j-1.2.17.jar:/home/hadoop/hadoop/share/hadoop/common/lib/j
 ions-2.7.8.jar:/home/hadoop/hadoop/share/hadoop/common/lib/kerb-crypto-1.0.1.jar:/home/hadoop/hadoop/share/h
          hadoop@u20-07:~$ start-dfs.sh
     Starting namenodes on [localhost]
     Starting datanodes
 Starting secondary namenodes [u20-07]
u20-07: Warning: Permanently added 'u20-07,172.26.35.127' (ECDSA) to the list of know
  2022-10-25 11:17:39,496 WARN util.NativeCodeLoader: Unable to load native-hadoop lib
    n-java classes where applicable
```

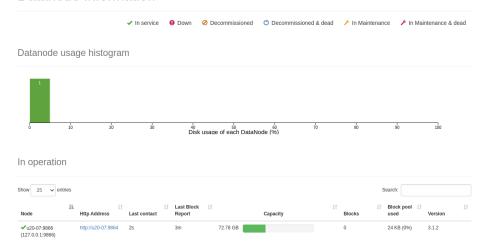
hadoop@u20-07:~\$ nano .bashrc

hadoop@u20-07:~\$

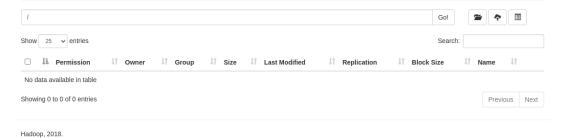
|hadoop@u20-07:~\$ hdfs dfsadmin -report 2022-10-25 11:18:18,879 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your n-java classes where applicable Configured Capacity: 78143852544 (72.78 GB) Present Capacity: 49216831488 (45.84 GB) DFS Remaining: 49216806912 (45.84 GB) DFS Used: 24576 (24 KB) DFS Used%: 0.00% Replicated Blocks: Under replicated blocks: 0 Blocks with corrupt replicas: 0 Missing blocks: 0 Missing blocks (with replication factor 1): 0 Low redundancy blocks with highest priority to recover: 0 Pending deletion blocks: 0 Erasure Coded Block Groups: Low redundancy block groups: 0 Block groups with corrupt internal blocks: 0 Missing block groups: 0 Low redundancy blocks with highest priority to recover: 0 Pending deletion blocks: 0 _____ Live datanodes (1): Name: 127.0.0.1:9866 (localhost) Hostname: u20-07 Decommission Status : Normal Configured Capacity: 78143852544 (72.78 GB) DFS Used: 24576 (24 KB) Non DFS Used: 24910712832 (23.20 GB) DFS Remaining: 49216806912 (45.84 GB) DFS Used%: 0.00% DFS Remaining%: 62.98% Configured Cache Capacity: 0 (0 B) Cache Used: 0 (0 B)



Datanode Information



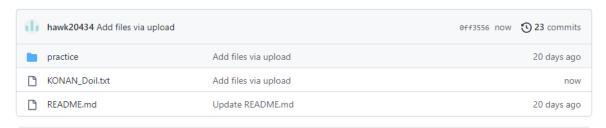
Browse Directory



hadoop@u20-07:/home/lemp\$ cd
hadoop@u20-07:~\$ hadoop fs -mkdir /user
2022-10-25 11:39:13,229 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... us
builtin-java classes where applicable
hadoop@u20-07:~\$ hadoop fs -mkdir /user/hadoop
2022-10-25 11:39:26,314 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... us
builtin-java classes where applicable
hadoop@u20-07:~\$ hadoop fs -ls /
2022-10-25 11:40:11,967 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... us
builtin-java classes where applicable
Found 1 items
drwxr-xr-x - hadoop supergroup 0 2022-10-25 11:39 /user
hadoop@u20-07:~\$

```
DATECTION CONTRACTOR AND CONTRACTOR 
 hadoop@u20-07:~$ hadoop fs -ls /
 2022-10-25 11:40:11,967 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
  builtin-java classes where applicable
 drwxr-xr-x
                      - hadoop supergroup
                                                                     0 2022-10-25 11:39 /user
 hadoop@u20-07:~$ hadoop fs -put /var/log/dpkg.log /user/hadoop/dpkg.log
2022-10-25 11:40:59,647 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
  builtin-java classes where applicable
 hadoop@u20-07:~$ hadoop jar hadoop/share/hadoop/mapreduce/hadoop-mapreduce-examples-3.1.2.jar wordcount /user/hadoo
 p/dpkg.log /user/hadoop/test output
 2022-10-25 11:41:30,395 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
  builtin-java classes where applicable
 2022-10-25 11:41:30,961 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
 2022-10-25 11:41:31,379 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/sta
 ging/hadoop/.staging/job_1666685890002_0001
 2022-10-25 11:41:32,034 INFO input.FileInputFormat: Total input files to process : 1
 2022-10-25 11:41:32,558 INFO mapreduce.JobSubmitter: number of splits:1
 2022-10-25 11:41:32,713 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1666685890002_0001
 2022-10-25 11:41:32,714 INFO mapreduce.JobSubmitter: Executing with tokens: []
 2022-10-25 11:41:32,914 INFO conf.Configuration: resource-types.xml not found 2022-10-25 11:41:32,914 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'
 2022-10-25 11:41:33,195 INFO impl.YarnClientImpl: Submitted application application 1666685890002 0001
 2022-10-25 11:41:33,229 INFO mapreduce.Job: The url to track the job: http://u20-07:8088/proxy/application 1666685%
 90002 0001/
 2022-10-25 11:41:33,230 INFO mapreduce.Job: Running job: job_1666685890002_0001
2022-10-25 11:41:41,350 INFO mapreduce.Job: Job job_1666685890002_0001 running in uber mode : false
 2022-10-25 11:41:41,353 INFO mapreduce.Job: map 0% reduce 0%
 2022-10-25 11:41:46,449 INFO mapreduce.Job: map 100% reduce 0%
 builtin-java classes where applicable
hadoop@u20-07:~$ hadoop fs -mkdir /user/hadoop
2022-10-25 11:39:26,314 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
builtin-java classes where applicable
hadoop@u20-07:~$ hadoop fs -ls /
2022-10-25 11:40:11,967 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
 builtin-java classes where applicable
Found 1 items
drwxr-xr-x
                     - hadoop supergroup
                                                                    0 2022-10-25 11:39 /user
hadoop@u20-07:~$ hadoop fs -put /var/log/dpkg.log /user/hadoop/dpkg.log
2022-10-25 11:40:59,647 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
 builtin-java classes where applicable
hadoop@u20-07:~$ hadoop jar hadoop/share/hadoop/mapreduce/hadoop-mapreduce-examples-3.1.2.jar wordcount /user/hadoc
p/dpkg.log /user/hadoop/test output
2022-10-25 11:41:30,395 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using
 builtin-java classes where applicable
2022-10-25 11:41:30,961 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032 2022-10-25 11:41:31,379 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/sta
ging/hadoop/.staging/job 1666685890002 0001
2022-10-25 11:41:32,034 INFO input.FileInputFormat: Total input files to process : 1
2022-10-25 11:41:32,558 INFO mapreduce.JobSubmitter: number of splits:1
2022-10-25 11:41:32,713 INFO mapreduce. JobSubmitter: Submitting tokens for job: job 1666685890002 0001
2022-10-25 11:41:32,714 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-10-25 11:41:32,914 INFO conf.Configuration: resource-types.xml not found
2022-10-25 11:41:32,914 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'
2022-10-25 11:41:33,195 INFO impl. YarnClientImpl: Submitted application application 1666685890002 0001
2022-10-25 11:41:33,229 INFO mapreduce.Job: The url to track the job: http://u20-07:8088/proxy/application_16666858
90002 0001/
2022-10-25 11:41:33,230 INFO mapreduce.Job: Running job: job_1666685890002_0001
2022-10-25 11:41:41,350 INFO mapreduce.Job: Job job_1666685890002_0001 running in uber mode : false 2022-10-25 11:41:41,353 INFO mapreduce.Job: map 0% reduce 0%
2022-10-25 11:41:46,449 INFO mapreduce.Job: map 100% reduce 0%
2022-10-25 11:41:50,486 INFO mapreduce.Job: map 100% reduce 100%
2022-10-25 11:41:50,501 INFO mapreduce.Job: Job job 1666685890002 0001 completed successfully
2022-10-25 11:41:50,639 INFO mapreduce.Job: Counters: 53
```

```
packages
                   80
pdsh:amd64
                   7
perl-base:amd64 9
perl-modules-5.30:all
perl:amd64
                   9
                             7
python-pip-whl:all
python3-dev:amd64
                             7
python3-distutils:all
                             7
python3-pip:all 7
python3-setuptools:all
                             7
python3-uno:amd64
                             18
python3-wheel:all
                             7
                             7
python3.8-dev:amd64
remove 16
sqml-base:all
shared-mime-info:amd64
                             8
ssh-import-id:all
                             7
ssh:all 7
startup 146
status
         1434
systemd:amd64
                   4
thunderbird-gnome-support:amd64 9
thunderbird-locale-en-us:all
                                       9
thunderbird-locale-en:amd64
                                       9
thunderbird:amd64
triggers-awaited
                             2
triggers-pending
                             102
trigproc
                   102
ufw:all 4
uno-libs-private:amd64
                             18
unpack 66
unpacked
                   452
unzip:amd64
                   9
upgrade 96
ure:amd64
x11proto-core-dev:all
                             7
x11proto-dev:all
                             7
xorg-sgml-doctools:all
xtrans-dev:all
zlib1g-dev:amd64
                             16
zlib1g:amd64
hadoon@u20-07.~¢
      Show 25 ✔ entries
                                                                Search:
      □ ↓ Permission
                                      ↓↑ Last Modified
                                                 ↓↑ Replication
                                                          ↓↑ Block Size
                                                                   ↓↑ Owner
                         ↓↑ Group
                                ↓↑ Size
                                        Oct 25 11:41
                                                   0
           drwx-----
                    hadoop
                           supergroup
                                        Oct 25 11:39
                                                                            â
           drwxr-xr-x
                    hadoop
                           supergroup
      Showing 1 to 2 of 2 entries
                                                                     Previous 1 Next
      Hadoop, 2018.
```



```
lemp@u20-07:~$ sudo su hadoop
    hadoop@u20-07:/home/lemp$ git clone https://github.com/hawk20434/practicDS
     fatal: could not create work tree dir 'practicDS': Permission denied
    hadoop@u20-07:/home/lemp$ cd
    hadoop@u20-07:~$ git clone https://github.com/hawk20434/practicDS
    Cloning into 'practicDS'...
     remote: Enumerating objects: 73, done.
    remote: Counting objects: 100% (73/73), done.
   remote: Compressing objects: 100% (60/60), done.
     remote: Total 73 (delta 15), reused 0 (delta 0), pack-reused 0
   Unpacking objects:_100% (73/73), 4.74 MiB | 8.21 MiB/s, done.
    hadoop@u20-07:~$ S
  hadoop@u20-07:~$ hadoop fs -put practicDS/konan.txt /user/hadoop/kanon.txt
2022-11-01 10:32:17,114 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes wh
  applicable
   hadoop@u20-07:~$
hadoop@u20-07:-$

hadoop@u20-07:-$

hadoop@u20-07:-$

start-dfs.sh

Starting namenodes on [localhost: sane survived with exit code 1

Starting datanodes

localhost: namenode is running as process 702972. Stop it first.
pdsh@u20-07: localhost: ssh exited with exit code 1

Starting datanodes

localhost: datanode is running as process 703147. Stop it first.
pdsh@u20-07: localhost: ssh exited with exit code 1

Starting secondary namenodes [u20-07]

u20-07: secondary namenodes [u20-07]

u20-07: secondary namenode is running as process 703352. Stop it first.
pdsh@u20-07:-s sh exited with exit code 1

2022-11-01 lo:38:15,753 INFO mapreduce.

Starting nesouncemnanager

starting nodemanagers

hadoop@u20-07:-s start-yarn.sh

hadoop@u20-07:-s start-yarn.sh

hadoop@u20-07:-s start-yarn.sh

hadoop@u20-07:-s start-yarn.sh

starting nodemanagers

hadoop@u20-07:-s start-yarn.sh

hadoop jar hadoop/share/hadoop/mapreduce/hadoop-mapreduce-examples-3.1.2.jar wordcount /user/hadoop/kanon.txt /user/hadoop/kanon.l Output

2022-11-01 lo:38:55,737 INFO bint-fileInputForas: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

2022-11-01 lo:38:56,737 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032

2022-11-01 lo:38:57,033 INFO input.FileInputFormat: Total input files to process: 1

2022-11-01 lo:38:57,033 INFO input.FileInputFormat: Total input files to process: 1

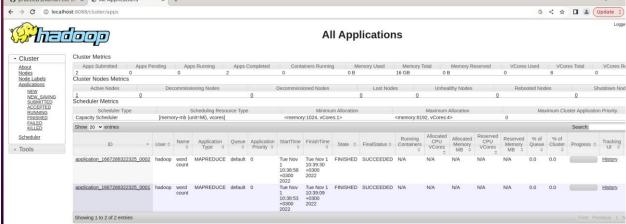
2022-11-01 lo:38:57,033 INFO mapreduce.JobSubmitter: submitting tokens for job: job_1667288322325_0002

2022-11-01 lo:38:57,036 INFO mapreduce.JobSubmitter: Submitted application application application application _1667288322325_0002

2022-11-01 lo:38:58,275 INFO mapreduce.JobSubmitter: Submitted application application _1667288322325_0002

2022-11-01
```

iotal megapyte-milliseconds taken by all reduce tasks=210/392 Map-Reduce Framework Map input records=12646 Map output records=104505 Map output bytes=977667 Map output materialized bytes=209474 Input split bytes=108 Combine input records=104505 Combine output records=14660 Reduce input groups=14660 Reduce shuffle bytes=209474 Reduce input records=14660 Reduce output records=14660 Spilled Records=29320 Shuffled Maps =1 Failed Shuffles=0 Merged Map outputs=1 GC time elapsed (ms)=118 CPU time spent (ms)=1790 Physical memory (bytes) snapshot=578715648 Virtual memory (bytes) snapshot=5093842944 Total committed heap usage (bytes)=473432064 Peak Map Physical memory (bytes)=356380672 Peak Map Virtual memory (bytes)=2550337536 Peak Reduce Physical memory (bytes)=222658560 Peak Reduce Virtual memory (bytes)=2543984640 Shuffle Errors BAD ID=0 CONNECTION=0 IO ERROR=0 WRONG LENGTH=0 WRONG MAP=0 WRONG_REDUCE=0 File Input Format Counters Bytes Read=575049 File Output Format Counters Bytes Written=152030



```
hadoop@u20-07:~$ head -25 kanon_1_Output.csv | sort -k 2 -n -r
"'And 10
"'Do
        3
"'Dear
        2
"'Certainly
                2
"'Ah,
"'Ah!'
"'December
                1
"'Death,'
                1
"'Dearest
                1
"'DEAR 1
"'Come, 1
"'Come! 1
"'Certainly,'
                1
"'But,' 1
"'But,
        1
"'But
        1
"'Breckinridge, 1
"'Because
"'At
"'As
"'Arthur!'
                1
"'Ample.'
                1
"'Absolute
                1
"'About 1
" ' A
hadoop@u20-07:~$
```

hadoop@u20-07:~\$ hadoop fs -get /user/hadoop/kanon_1_Output/part-r-00000 kanon_1_Output.csv 2022-11-01_10:43:31,347 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

Индивидуальное задание